PIXMA iP4200

SERVICE MANUAL

Revision 0

QY8-13A9-000

Scope

This manual has been issued by Canon Inc., to provide the service technicians of this product with the information necessary for qualified persons to learn technical theory, installation, maintenance, and repair of products. The manual covers information applicable in all regions where the product is sold. For this reason, it may contain information that is not applicable to your region.

Revision

This manual could include technical inaccuracies or typographical errors due to improvements or changes made to the product. When changes are made to the contents of the manual, Canon will release technical information when necessary. When substantial changes are made to the contents of the manual, Canon will issue a revised edition.

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I. MANUAL OUTLINE

This manual consists of the following three parts to provide information necessary to service the PIXMA iP4200:

Part 1: Maintenance
Information on maintenance and troubleshooting of the PIXMA iP4200

Part 2: Technical Reference
New technology and technical information such as FAQ's (Frequently Asked Questions) of the PIXMA iP4200

Part 3: Appendix
Block diagrams and pin layouts of the PIXMA iP4200

Reference:
This manual does not provide sufficient information for disassembly and reassembly procedures. Refer to the graphics in the separate Parts Catalog.

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II. TABLE OF CONTENTS

Part 1

MAINTENANCE

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1. MAINTENANCE

1-1. Adjustment, Periodic Maintenance, Periodic Replacement Parts, and Replacement Consumables by Service Engineer

(1) Adjustment

Adjustment	Timing	Purpose	Tool	Approx. time
Destination settings (EEPROM settings)	At logic board replacement	To set the destination.	None. Perform in the service mode.	1 min.
Waste ink counter resetting (EEPROM settings)	- At logic board replacement - At waste ink absorber replacement	To reset the waste ink counter.	None. Perform in the service mode.	1 min.
Paper feed motor position adjustment	At paper feed motor replacement	To adjust the belt tension. (Position the paper feed motor so that the belt is stretched tight.)	None.	5 min.
CD / DVD detection sensor light volume correction[*1]	- At logic board replacement - At carriage unit replacement	To correct the light volume for the CD / DVD detection sensor.	None. Perform in the service mode.	2 min.
Grease application	- At carriage unit replacement - At PR shaft ass'y replacement - At CL base / gear replacement	- To maintain sliding properties of the carriage shaft and the lift cam shaft. - To protect the printer's sliding portions (gears).	FLOIL KG-107A	1 min.
Ink system function check	- At logic board replacement - At platen unit replacement - At carriage unit replacement	To maintain detection functionality for presence of the ink tanks and each ink tank position.	None. Perform in the service mode.	1 min.

Note: DO NOT loosen the red screws at both ends of the carriage shaft, securing the print head position, as they are not re-adjustable.
The red screws securing the paper feed motor may be loosened only at replacement of the paper feed motor unit.

*1: Only for CD / DVD printing supported regions.

(2) Periodic maintenance
No periodic maintenance is necessary.

(3) Periodic replacement parts
There are no parts in this printer that require periodic replacement by a service engineer.

(4) Replacement consumables
There are no consumables that require replacement by a service engineer.

1-2. Customer Maintenance

Adjustment	Timing	Purpose	Tool	Approx. time
Print head alignment	At print head replacement.	To ensure accurate dot placement.	- Printer buttons - Computer (automatic settings via the printer driver)	3 min.
Print head cleaning	When print quality is not satisfying.	To improve nozzle conditions.	- Printer buttons - Computer (settings via the printer driver)	1 min.
Print head deep cleaning	When print quality is not satisfying, and not improved by print head cleaning.	To improve nozzle conditions.	Computer (settings via the printer driver)	2 min.
Ink tank replacement	When an ink tank becomes empty. ("No ink error" via the computer, or ink tank LED flashing fast in red)	-----	-----	2 min.
Paper feed roller cleaning	When necessary	To clean the paper feed rollers.	Printer buttons	2 min.
CD / DVD print position adjustment	At CD / DVD printing, when necessary	To correct CD / DVD print position.	Computer (application software)	5 min.
Bottom plate cleaning	When the back side of the paper is smeared	To clean the platen ribs.	- Plain paper - Computer (settings via the printer driver)	1 min.
ASF sub- roller cleaning	When the paper fed from the ASF is smeared due to ink mist attached to the ASF sub-rollers.	To clean the ASF sub-rollers.	- Plain paper - Printer buttons [See Part 2, 4. FAQ, How to make and set the ASF sub-roller cleaning sheet, for details]	1 min.

1-3. Product Life

(1) Printer

Specified print volume (I) or the years of use (II), whichever comes first.

(I) Print volume

PIXMA iP4200: 18,000 pages

Black	1,500 character pattern	8,300 pages
Color	A4, 7.5% duty per color pattern	5,400 pages
	A4, photo, borderless printing	400 pages
	4 x 6, photo, borderless printing	3,200 pages
	Postcard, photo, borderless printing	700 pages

(II) Years of use

PIXMA iP4200: 5 years of use

(2) Print head

Print volume: 18,000 pages

Black	1,500 character pattern	8,300 pages
Color	A4, 7.5% duty per color pattern	5,400 pages
	A4, photo, borderless printing	400 pages
	4 x 6, photo, borderless printing	3,200 pages
	Postcard, photo, borderless printing	700 pages

(3) Ink tank (target value)

Pattern	Ink tank used	Print yield
Black text	PGI-5BK	Approx. 820 pages
	CLI-8BK	
Color chart	CLI-8BK	Approx. 2,000 pages
	PGI-5BK	Approx. 1,450 pages
	CLI-8Y	Approx. 540 pages
	CLI-8M	Approx. 600 pages
	CLI-8C	Approx. 850 pages
Photo chart	CLI-8BK	Approx. 1,650 pages
	CLI-8Y	Approx. 310 pages
	CLI-8M	Approx. 290 pages

	CLI-8C	Approx. 430 pages	

Black text: When printing the Canon standard pattern (1,500 characters per page) on A4 size plain paper, with the default settings in the Windows XP driver, using Word 2003.

Color chart: When printing the ISO/JIS-SCID N5 pattern on A4 size plain paper in bordered printing, with the default settings in the Windows XP driver, using Photoshop 7.0.

Photo chart: When printing the Canon standard pattern on 4″ x 6″ Photo Paper Plus Glossy in borderless printing, with the default settings in the Windows XP driver, using Windows XP Photo Printing Wizard.

The print yield in the table above is an average value measured in continuous printing, using the ink tank immediately after it is unsealed, until the ink is out. Ink yield may vary depending on texts and photos printed, application software, print mode, and type of paper used.

1-4. Special Tools

Name	Tool No.	Price	Application	Remarks
Grease FLOIL KG-107A	QY9-0057-000	US$2.00	To be applied to the sliding portions of the carriage shaft and lift cam shaft.	In common with the S500 and S520.

1-5. Serial Number Location

On the carriage flexible cable holder (visible on the right of the carriage after the printer is turned on, the access cover is opened, and the carriage moves to the center).

<Part 1: 1. MAINTENANCE>

2. LIST OF ERROR DISPLAY / INDICATION

Errors are indicated by the LED, and warnings are displayed on the monitor of the computer connected to the printer.

2-1. Operator Call Errors (by Alarm LED Blinking in Orange)

Alarm LED blinking in orange	Error [Error code]	Solution	Remarks
2 times	No paper. (ASF) [1000]	Set the paper in the ASF, and press the Resume/Cancel button.	
	No CD / DVD tray. [1001]*1	Set the CD / DVD tray, and press the Resume/Cancel button.	
	No paper in the cassette. [1003] (No paper in the front paper feed cassette.)	Set the paper in the cassette, and press the Resume/Cancel button.	
	No CD / DVD. [1002]*1	Set a CD or DVD in the CD / DVD tray (which is ejected at error occurrence), and insert the CD / DVD tray in the proper position. Then, press the Resume/Cancel button.	
3 times	Paper jam. [1300]	Remove the jammed paper, and press the Resume/Cancel button.	Error in paper feeding from the ASF.
	Paper jam in the rear guide. [1303]		Error in the duplex printing unit.
	Paper jam in the under guide. [1304]		Error in paper feeding from the cassette.
	Front door close error. [1250]	Open the paper output tray.	The error is indicated if the paper output tray is closed at start of a print job, or while a print job is being performed.
4 times	No ink. [1600]	Replace the empty ink tank(s), or press the Resume/Cancel button.	Pressing the Resume/Cancel button will exit the error without ink tank replacement, however, ink may run out during printing.
	Ink tank not installed. [1660]	Install the applicable ink tank(s) properly, and confirm that the LED's of all the ink tanks light red.	
5 times	The print head is not installed [1401], or it is not properly installed (Print head temperature sensor error [1403] / Faulty EEPROM data of the print head [1405]).	Install the print head properly.	

6 times	Inner cover open. [1841]*2	Close the inner cover, and press the Resume/Cancel button.	
	Inner cover open during printing on paper. [1846]*2	Close the inner cover, and press the Resume/Cancel button.	
	Inner cover open during printing on paper (print continuable). [1851]*1	Close the inner cover, and press the Resume/Cancel button.	
	Inner cover open during printing on paper (print NOT continuable). [1856]*1	Close the inner cover, and press the Resume/Cancel button to clear the error. The paper being printed at error occurrence will be ejected without printing the remaining data for the ejected paper, then printing will resume from the next page.	
	Inner cover closed during CD / DVD printing (print continuable). [1850]*1	Open the inner cover which functions as the CD / DVD tray feeder, set the CD / DVD tray in the feeder, and press the Resume/Cancel button.	
	Inner cover closed during CD / DVD printing (print NOT continuable). [1855]*1	Open the inner cover, and press the Resume/Cancel button to clear the error. The CD or DVD being printed at error occurrence will be ejected without printing the remaining data for the ejected CD or DVD, then the next print job will be done.	
7 times	Multiple ink tanks of the same color installed. [1681]	Replace the wrong ink tank(s) with the correct one(s).	
	Ink tank in a wrong position. [1680]	Install the ink tank(s) in the correct position.	
8 times	Warning: The waste ink absorber becomes almost full. [1700]	Pressing the Resume/Cancel button will exit the error, and enable printing.	The service call error, indicating the waste ink absorber is full, is likely to occur soon.
9 times	The connected digital camera or digital video camera does not support Camera Direct Printing. [2001]	Remove the cable between the camera and the printer.	
10 times	Automatic duplex printing cannot be performed. [1310]	Press the Resume/Cancel button to eject the paper being used at error occurrence. Printing will resume from on the front side of the next page.	Data which was to be printed on the back side of paper at error occurrence is skipped (not printed).
11 times	Failed in automatic print head alignment. [2500]	Press the Resume/Cancel button. - If paper is being fed at error occurrence, the error is indicated after the paper is ejected. - If the error occurs, the print head alignment values are not changed. - After exit from the error by the	The error is indicated when the pattern is not printed due to no ink or non-ejection of ink, or when the sensor's AD value

		Resume/Cancel button, the automatic print head alignment will not be re-done.	is incorrect.
13 times	The remaining ink amount unknown. [1683]	An ink tank which has once been empty is installed. Replace the applicable ink tank with a new one.	Printing with a once-empty or refilled ink tank can damage the print head. If printing is continued without replacing the "no-good" ink tank, press the Resume/Cancel button for 5 sec. or longer to record the use of a refilled ink tank. Note: After the above operation, the function to detect the remaining ink amount is disabled.
14 times	Ink tank not recognized. [1684]	A non-supported ink tank is installed (the ink tank LED is turned off). Install the supported ink tanks.	
15 times	Ink tank not recognized. [1410 to 1419]	An error occurred in an ink tank (the ink tank LED is turned off). Replace the ink tank(s).	
	Access cover open. [1200]	Close the access cover.	

*1: Only for models supporting CD / DVD printing

*2: Only for models not supporting CD / DVD printing

2-2. Service Call Errors (by Cyclic Blinking in Orange (Alarm LED) and Green (Power LED), or Alarm LED Lit in Orange)

Cycles of blinking in orange (Alram LED) and green (Power LED)	Error [Error code]	Solution (Replacement of listed parts, which are likely to be faulty)
2 times	Carriage error [5100]	- Carriage unit (QM2-2207) - Timing slit strip film (QC1-6394) - Logic board ass'y (QM2-2670)[1] - Carriage motor (QK1-1500)
3 times	Line feed error [6000]	- Timing sensor unit (QM2-2683) - Timing slit disk film (QC1-6229) - Feed roller ass'y (QL2-0925) - Platen unit (QM2-2202) - Logic board ass'y (QM2-2670)[1] - PAPER FEED MOTOR (QK1-1502)
4 times	Purge cam sensor error [5C00]	- Purge unit (QM2-2208)

		- Logic board ass'y (QM2-2670)[*1]
5 times	ASF (cam) sensor error [5700]	- Sheet feed unit (QM2-2211)
6 times	Internal temperature error [5400]	- Logic board ass'y (QM2-2670)[*1]
7 times	Waste ink absorber full [5B00]	- Ink absorber kit (QY5-0146)
8 times	Print head temperature rise error [5200]	- Print head (QY6-0059) - Logic board ass'y (QM2-2670)[*1]
9 times	EEPROM error [6800]	- Logic board ass'y (QM2-2670)[*1]
11 times	Carriage lift mechanism error [5110]	- PR lift shaft ass'y (QL2-0936) - Sheet feed unit (QM2-2211) - Logic board ass'y (QM2-2670)[*1] - Carriage lift sensor unit (QM2-2678)
12 times	AP position error [6A00]	- Sheet feed unit (QM2-2211) - Logic board ass'y (QM2-2670)[*1] - Purge unit (QM2-2208)
13 times	Paper feed position error [6B00]	- Sheet feed unit (QM2-2211) - Logic board ass'y (QM2-2670)[*1]
14 times	Paper feed cam sensor error [6B10]	- Sheet feed unit (QM2-2211) - Logic board ass'y (QM2-2670)[*1]
15 times	USB Host VBUS overcurrent [9000]	- Logic board ass'y (QM2-2670)[*1]
16 times	Valve sensor error [6C00]	- Logic board ass'y (QM2-2670)[*1] - Purge unit (QM2-2208)
17 times	Motor driver error [6D00]	- Logic board ass'y (QM2-2670)[*1]
19 times	Ink tank position sensor error [6502]	- Platen unit (QM2-2202) - Logic board ass'y (QM2-2670)[*1]
20 times	Other hardware error [6500]	- Logic board ass'y (QM2-2670)[*1]
Continuous alternate blinking	ROM error	- Logic board ass'y (QM2-2670)[*1]
Alarm LED lit	RAM error	- Logic board ass'y (QM2-2670)[*1]

*1: Before replacement of the logic board ass'y, check the waste ink amount (by service test print or EEPROM information print). If the waste ink amount is 7% or more, also replace the ink absorber kit (QY5-0146) when replacing the logic board ass'y.
[See Section 3-3. Adjustment / Settings, (5) Service mode, for details.]

2-3. Warnings

Printer (no LED indications):

Displayed warning	Remarks
Low ink	Status indication only.
Print head temperature rise	If the print head temperature is high when the access cover is opened, the warning is displayed[*1]. When the print head temperature falls, the warning is released.
Protection of excess rise of the print head temperature	If the print head temperature exceeds the specified limit, a Wait is inserted during printing,

*1: If the warning is displayed, the carriage does not move to the ink tank replacement position when the access cover is opened.

2-4. Troubleshooting by Symptom

	Symptom	Solution	Remarks
Faulty operation	The power does not turn on. The power turns off immediately after power-on.	Replace the - AC adapter, or - logic board ass'y[*1].	
	A strange noise occurs.	Remove foreign material, or attach a removed part if any.	
	Printing stops mid-way.	Replace the logic board ass'y[*1].	
Paper feed problems	Multiple sheets feed.	Replace the - sheet feed unit, or - cassette.	
	Paper does not feed.	Remove foreign material, or replace the - sheet feed unit, or - cassette.	
	Paper feeds at an angle.	Remove foreign material, adjust the paper guide, or replace the - sheet feed unit, or - cassette.	
	No printing, or no color ejected.	Replace the - ink tank,	

		- print head[2], or - logic board ass'y[1], remove foreign material from the purge unit caps, if any, or replace the purge unit.	

Unsatisfactory print quality	Printing is faint, or white lines appear on printouts even after print head cleaning.
	Line(s) not included in the print data appears on printouts.
		Remove and re-install the print head, or replace the
		  - ink tank,
		  - print head[2],
		  - purge unit, or
		  - logic board ass'y[1].	

	Paper gets smeared.	Feed several sheets of paper, perform bottom plate cleaning, clean the paper path with cotton swab or cloth, or clean the ASF sub-rollers.	

	A part of a line is missing on printouts.	Replace the
		  - ink tank, or
		  - print head[2].	

	Color hue is incorrect.	Replace the
		  - ink tank, or
		  - print head[2], or
		perform print head alignment.	

	Printing is incorrect.	Replace the logic board ass'y[1].	

	No ejection of black ink.	Replace the
		  - ink tank, or
		  - print head[2], or
		remove foreign material from the purge unit caps, if any, or
		replace the purge unit.	

	Graphic or text is enlarged on printouts.	When enlarged in the carriage movement direction, clean grease or oil off the timing slit strip film, or replace the
		  - timing slit strip film,
		  - carriage unit, or
		  - logic board ass'y[1].
		When enlarged in the paper feed direction, clean grease or oil off the timing slit disk film, or replace the
		  - timing slit disk film,
		  - timing sensor unit, or
		  - logic board ass'y[1].	

*1: Before replacement of the logic board ass'y, check the waste ink amount (by service test print or EEPROM information print). If the waste ink amount is 7% or more, also replace the ink absorber kit (QY5-0146) when replacing the logic board ass'y.
[See Section 3-3. Adjustment / Settings, (5) Service mode, for details.]

*2: Replace the print head only after the print head deep cleaning is performed 2 times, and when the problem persists.

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← <Part 1: 2. LIST OF ERROR DISPLAY / INDICATION> →

3. REPAIR

3-1. Notes on Service Part Replacement (and Disassembling / Reassembling)

Service part	Notes on replacement[*1]	Adjustment / settings	Operation check
Logic board ass'y QM2-2670	- Before removal of the logic board ass'y, remove the power cord, and allow for approx. 1 minute (for discharge of capacitor's accumulated charges), to prevent damages to the logic board ass'y. - Before replacement, check the waste ink amount (by service test print or EEPROM information print). If the waste ink amount is 7% or more, also replace the ink absorber kit when replacing the logic board ass'y. [See 3-3. Adjustment / Settings, (5) Service mode, for details.]	**After replacement:** 1. Initialize the EEPROM. 2. Reset the waste ink counter. 3. Set the destination in the EEPROM. 4. Correct the CD / DVD and automatic print head alignment sensors. 5. Check the ink system function. [See 3-3. Adjustment / Settings, (5) Service mode, for details of 1 to 5] 6. Perform the print head alignment in the user mode.	- EEPROM information print - Service test print - Printing via USB connection - Direct printing from a digital camera
Ink absorber kit QY5-0146		**After replacement:** 1. Reset the waste ink counter. [See 3.3. Adjustment / Settings, (5) Service mode.]	- Service test print - EEPROM information print
Carriage unit QM2-2207		**At replacement:** 1. Apply grease to the sliding portions. [See 3-3. Adjustment / Settings, (2) Grease application.] **After replacement:** 1. Correct the CD / DVD and automatic print head alignment sensors. [See 3.3. Adjustment / Settings, (5) Service mode.] 2. Check the ink system function. [See 3.3. Adjustment / Settings, (5) Service mode.] 3. Perform the print head alignment in the user mode.	- Service test print (Confirm CD / DVD and automatic print head alignment sensor correction, and ink system function.)
Paper feed motor QK1-1502	- The red screws securing the paper feed motor are allowed to be loosened. (DO NOT loosen any other red screws.)	**At replacement:** 1. Adjust the paper feed motor. [See 3-3. Adjustment / Settings, (1) Paper feed motor adjustment.]	
Platen unit: QM2-2202	- By attaching the tape at the specified 2 locations,	**At replacement:**	After the printer unit is assembled in the bottom

Purge unit: QM2-2208 Waste ink tube: QC1-6458 Waste ink tube holder: QC1-6460	secure the waste ink tube to the waste ink tube holder.	1. To protect the waste ink tube from being pinched when reassembling the printer unit chassis into the bottom case unit, tape the tube (at 2 locations). [See 3-2. Special Notes on Repair Servicing, (3) Printer unit and bottom case unit assembly.]	case unit, the tube conditions are not visible. For confirmation of the tube conditions, perform the manual purging 3 or 4 times, and confirm that no strange noise is heard.
Platen unit QM2-2202		**After replacement**: 1. Check the ink system function. [See 3-3. Adjustment / Settings, (5) Service mode.]	- Service test print
PR lift shaft ass'y QL2-0936 CL input gear QC1-6213		**At replacement:** 1. Apply grease to the sliding portions. [See 3.3. Adjustment / Settings, (2) Grease application.]	- Service test print
Timing slit strip film QC1-6394 Timing slit disk film QC1-6229	- Upon contact with the film, wipe the film with ethanol. - Confirm no grease is on the film. (Wipe off any grease thoroughly with ethanol.) - Do not bend the film	**After replacement:** 1. Perform the print head alignment in the user mode.	- Service test print
Print head QY6-0059		**After replacement:** 1. Perform the print head alignment in the user mode.	- Service test print

*1: General notes:

- Make sure that the flexible cables and wires in the harness are in the proper position and connected correctly.

   [See 3-2. Special Notes on Repair Servicing, (2) Flexible cable and harness wiring, connection, for details.]

- Protect the waste ink tube from being pinched when assembling the printer unit chassis into the bottom case unit.

   Since the tube conditions after assembly are not visible, perform the manual purging 3 or 4 times to confirm that no strange noise is heard.

   [See 3-2. Special Notes on Repair Servicing, (3) Printer unit and bottom case unit assembly, for details.]

- Do not drop the ferrite core, which may cause damage.

- Protect electrical parts from damage due to static electricity.

- Before removing a unit, after removing the power cord, allow the printer to sit for approx. 1 minute (for capacitor discharging to protect the logic board ass'y from damages).

- Do not touch the timing slit strip film and timing slit disk film. No grease or abrasion is allowed.

- Protect the units from soiled with ink.

- Protect the housing from scratches.

- Exercise caution with the red screws, as follows:

   i. The red screws of the paper feed motor may be loosened only at replacement of the paper feed motor unit (DO NOT loosen them in other cases).

   ii. DO NOT loosen the red screws on both sides of the main chassis, securing the carriage shaft positioning (they are not adjustable in servicing).

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3-2. Special Notes on Repair Servicing

(1) External cover removal

(I) Release the 2 hooks on the rear side of the printer (indicated by the blue circles).

(II) Release the hooks on the left and right side of the main case (indicated by the blue circle).

(III) While inserting the flat-blade screwdriver in the slots on the left and right sides of the printer front shown in the figures below, release the hooks to remove the main case from the bottom case.

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∨
∨

(2) Flexible cable and harness wiring, connection

Be careful of wiring of the flexible cables and harness. Improper wiring or connection may cause breakage of a line, leading to ignition or emission of smoke.
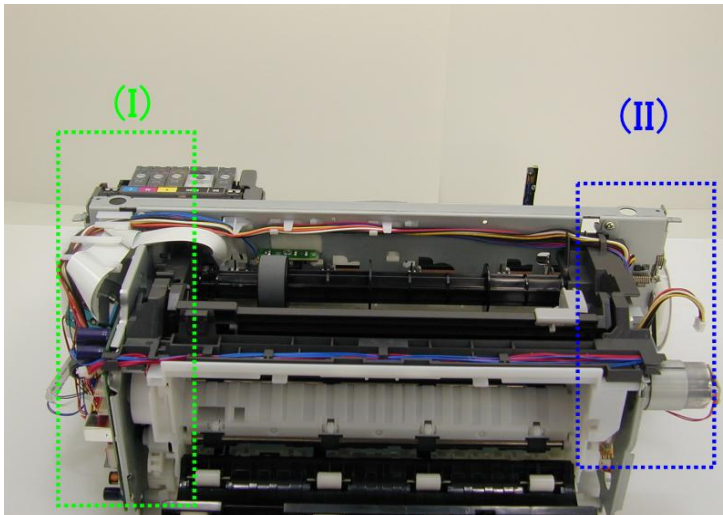
(I) Logic board ass'y wiring
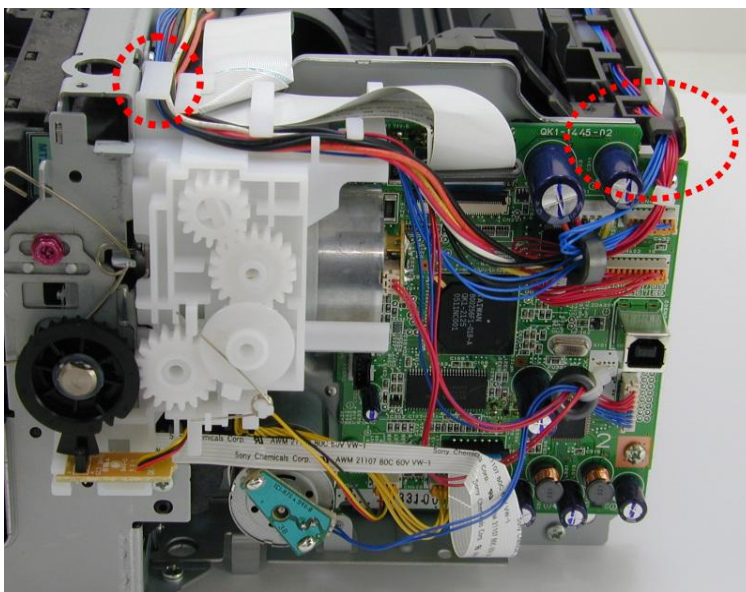
(II) Paper feed motor side wiring
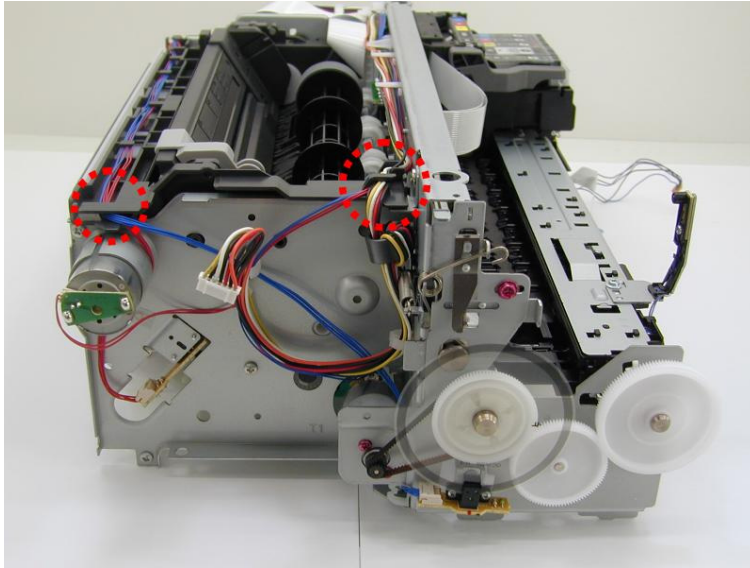
(3) Printer unit and bottom case unit assembly

In assembling the printer unit chassis into the bottom case unit, **be cautious of the following points** to protect the waste ink tube from being pinched:

(I) At replacement of the platen unit (QM2-2202), purge unit (QM2-2208), waste ink tube (QC1-6458), or waste ink tube holder (QC1-6460), fix the waste ink tube to the printer chassis and waste ink tube holder with tape (at 2 locations).

If the tube is pinched and blocked, proper purging is prevented, resulting in ink leakage or strange noise.

(No specific tape is specified. In the sample photo below, (1) is the orange tape, and (2) is a clear adhesive tape, such as Sellotape or Scotch tape.)

① 80±5mm   ② 30±5mm
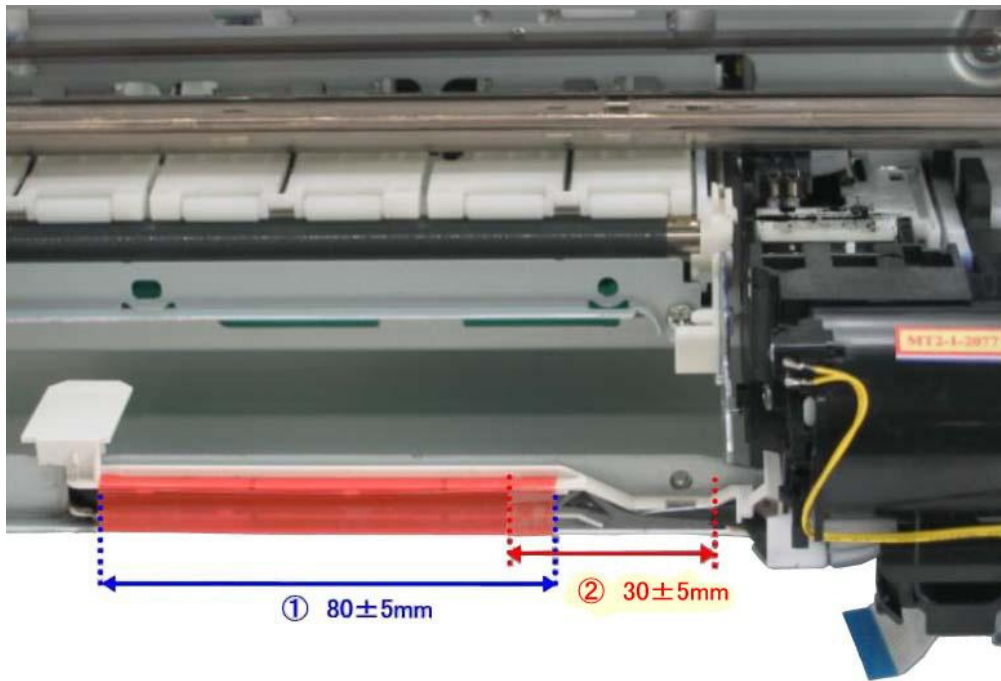
(II) After securing the waste ink tube with tape, be careful not to damage the tube in installing the printer unit chassis in the bottom case unit.

With the units assembled, the tube conditions are not visible. To confirm the tube is free from damage, perform the manual purging 3 or 4 times, and confirm that no strange noise is heard.

[Example: The tube is pinched and blocked as it is not fixed with tape.]

NG
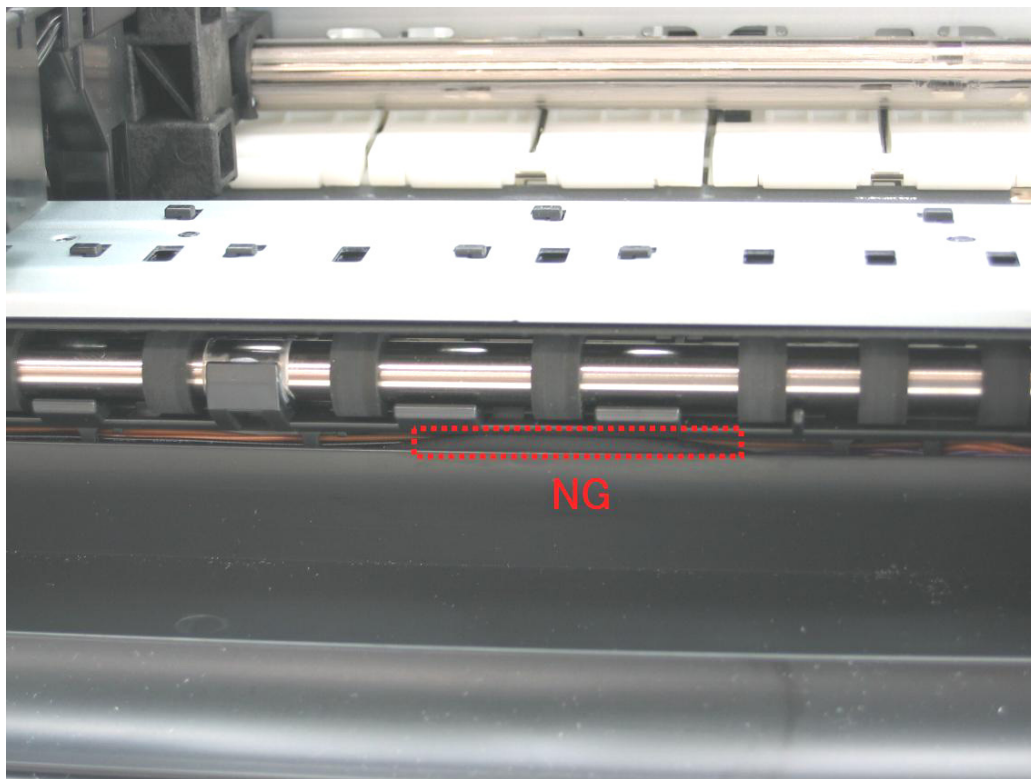
3-3. Adjustment / Settings

(1) Paper feed motor adjustment

Perform the following adjustments when the paper feed motor unit is replaced:

1) When attaching the motor, fasten the screws so that the belt is properly stretched (in the direction indicated by the blue arrow in the figure below).

2) After replacement, be sure to perform the service test print, and confirm that no strange noise or faulty print operation (due to dislocation of the belt or gear, or out-of-phase motor, etc.) occurs.
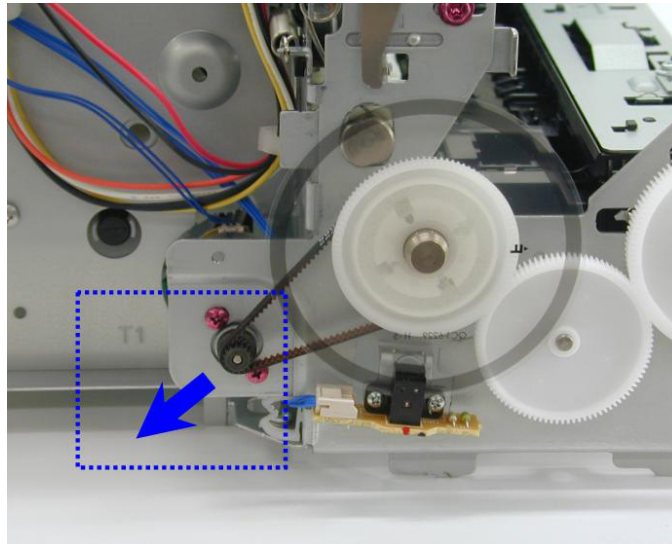
Note: The red screws securing the paper feed motor may be loosened only at replacement of the paper feed motor unit. DO NOT loosen them in other cases.

(2) Grease application

1) Printer unit

No	Part name		Where to apply grease / oil	Grease / oil name	Grease / oil amount	Number of drops*	Number of locations to apply grease / oil
1	Chassis ass'y	①	Entire surface the carriage slider contacts	Floil KG107A	27 to 54 mg	3	1
2	Chassis ass'y	②	PR lift shaft cam contact portion (at 3 locations)	Floil KG107A	9 to 18 mg	1	3
3	Adjust plate L	③	Carriage shaft cam L sliding portion	Floil KG107A	18 to 36 mg	2	1
4	Chassis ass'y	④	Carriage shaft sliding portion on the left side of the chassis (at 2 locations)	Floil KG107A	9 to 18 mg	1	2
5	Chassis ass'y	⑤	Carriage shaft sliding portion on the right side of the chassis (at 2 locations)	Floil KG107A	9 to 18 mg	1	2
6	Carriage shaft	⑥	Entire surface of the carriage shaft where the carriage unit slides	Floil KG107A	200 to 400 mg		1
7	Carriage shaft spring L	⑦	Carriage shaft sliding portion (to the end of the spring)	Floil KG107A	9 to 18 mg	1	1
8	Adjust plate R	⑧	Carriage shaft cam R sliding portion	Floil KG107A	18 to 36 mg	2	1
9	Carriage shaft	⑨	Carriage shaft surface where the carriage slides (and where machine-application of the grease is not feasible)	Floil KG107A	9 to 18 mg	1	1

* 1 drop = 9 to 18 mg

2) CL base / CL gear

No	Part name		Where to apply grease / oil	Grease / oil name	Grease / oil amount	Number of drops*	Number of locations to apply grease / oil
10	CL input gear	⑩	Joint of the CL gear base	Floil KG107A	9 to 18 mg	1	1
11	CL gear base	⑪	Outer surface of the CL idler gear cylinder	Floil KG107A	9 to 18 mg	1	1

* 1 drop = 9 to 18 mg
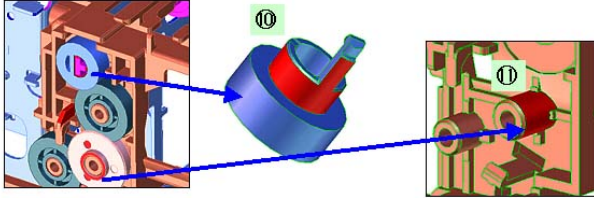
3) PR shaft / LF roller bushing

No	Part name		Where to apply grease / oil	Grease / oil name	Grease / oil amount	Number of drops*	Number of locations to apply grease / oil+H18
12	LF roller ass'y	⑫	LF roller bushing L spring contact	Floil KG107A	4.5 to 9 mg	1/2	1
13	PR shaft ass'y	⑬	PR spring sliding portion (at 4 locations)	Floil KG107A	9 to 18 mg	1	4
14	PR shaft ass'y	⑭	PR holder contact (at 4 locations)	Floil KG107A	13.5 to 27 mg	1.5	4

* 1 drop = 9 to 18 mg
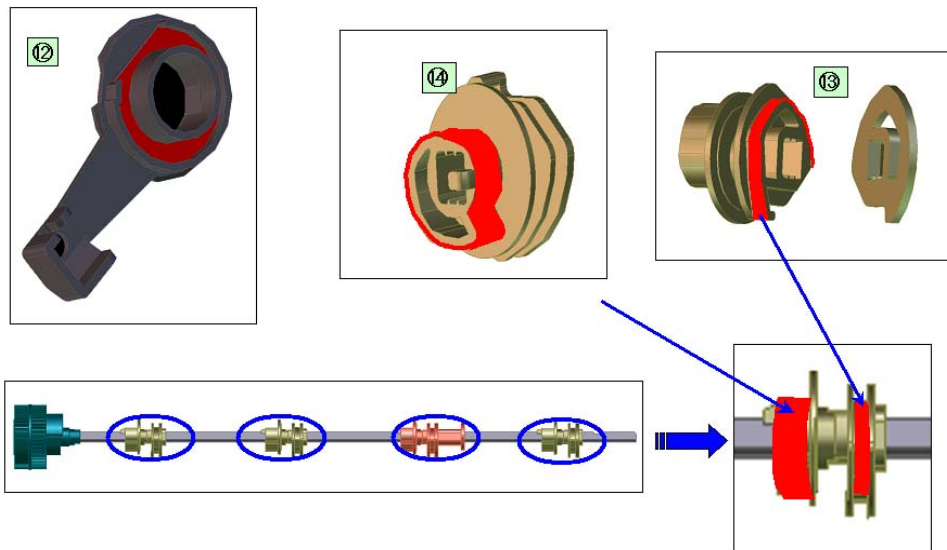
(3) Waste ink counter setting

When the logic board ass'y is replaced, reset the waste ink counter. In addition, according to the waste ink amount, replace the waste ink absorber (ink absorber kit). The standard amount for waste ink absorber replacement is given in the table below.

Waste ink amount[*1]	Ink absorber kit replacement
Less than 7%	Not required.
7% or more	Required.

*1: Check the waste ink amount by service test print or EEPROM information print.
[See 3.3. Adjustment / Settings, (5) Service mode, for details.]

(4) User mode

Function	Procedures	Remarks
Print head manual cleaning	- Cleaning both black and color: See "Standalone printer operation" below. - Cleaning black or color separately, or both black and color: Perform from the printer driver Maintenance tab.	
Print head deep cleaning	- Cleaning black or color separately, or both black and color: Perform from the printer driver Maintenance tab.	
Paper feed roller cleaning	See "Standalone printer operation" below.	
Nozzle check pattern printing	See "Standalone printer operation" below.	Also available from the printer driver Maintenance tab.
Print head alignment	See "Standalone printer operation" below.	In Custom Settings of the printer driver Maintenance tab, manual print head alignment (by selecting the optimum values) as with the conventional models can be performed.
Bottom plate cleaning	Perform from the printer driver Maintenance tab.	Cleaning of the platen ribs when the back side of paper gets smeared.
Print head replacement	The print head is replaceable at the same position as for ink tank replacement. (Open the access cover. When the carriage stops at the center, the print head can be replaced.)	

<Standalone printer operation>

1) Turn on the printer.

2) Press and hold the Resume/Cancel button until the Power LED blinks in green the specified number of times listed in the table below, and release it. The operation starts.

Power LED blinking	Operation	Remarks
1 time	Print head manual cleaning	
2 times	Nozzle check pattern printing	Set a sheet of plain paper (A4 or letter) in the ASF or the cassette (according to the Paper Feed switch

		setting).
3 times	Paper feed roller cleaning	
4 times	Automatic print head alignment	Set a sheet of plain paper (A4 or letter) in the ASF.
5 times	Bottom plate cleaning	Fold a sheet of plain paper (A4 or letter) in half crosswise, then unfold and set it in the ASF with the folded ridge facing down.
6 times	Unspecified	
7 times	The widest head-to-paper distance setting	
8 times or more	Unspecified	

(5) Service mode

Function	Procedures	Remarks
Service test print - Model name - Destination - ROM version - USB serial number - Waste ink amount - CD / DVD sensor correction value - Ink system function check result - CD / DVD sensor correction result	See "Service mode operation procedures" below.	Set a sheet of A4 or letter size paper. For print sample, see 3-4. Verification Items, (1) Service test print, <Service test print sample>.
EEPROM initialization	See "Service mode operation procedures" below.	The following items are NOT initialized, and the shipment arrival flag is not on: - USB serial number - Destination settings - Waste ink counter - CD / DVD correction value
Waste ink counter reset	See "Service mode operation procedures" below.	If the waste ink amount is 7% or more, replace the ink absorber kit.
Destination settings	See "Service mode operation procedures" below.	

Note: At the end of the service mode, press the Power button. To protect the media sensor from being dislocated during transportation, the paper lifting plate of the sheet feeder unit will be raised.

<Service mode operation procedures>

1) With the printer power turned off, while pressing the Resume/Cancel button, press and hold the Power button. (DO NOT release the buttons. The Power LED lights in green to indicate that a function is selectable.)

2) While holding the Power button, release the Resume/Cancel button. (DO NOT release the Power button.)

3) While holding the Power button, press the Resume/Cancel button 2 times, and then release both the Power and Resume/Cancel buttons. (Each time the Resume/Cancel button is pressed, the Alarm and Power LEDs light alternately, Alarm in orange and Power in green, starting with Alarm LED.)

4) When the Power LED lights in green, press the Resume/Cancel button the specified number of time(s)

according to the function listed in the table below. (Each time the Resume/Cancel button is pressed, the Alarm and Power LEDs light alternately, Alarm in orange and Power in green, starting with Alarm LED.)

Time(s)	LED indication	Function	Remarks
0 times	Green (Power)	Power off	When the print head is not installed, the carriage returns and locks in the home position capped.
1 time	Orange (Alarm)	Service test print	See 3-4. Verification Items, (1) Service test print.
2 times	Green (Power)	EEPROM information print	See 3-4. Verification Items, (2) EEPROM information print.
3 times	Orange (Alarm)	EEPROM initialization	
4 times	Green (Power)	Waste ink counter resetting	
5 times	Orange (Alarm)	Destination settings	After entering the destination settings mode, press the Resume/Cancel button the specified number of time(s) to select the destination. For detail, see "Destination settings procedures" below.
6 times	Green (Power)	Print head deep cleaning	(Cleaning of both black and color)
7 times	Orange (Alarm)	Reserved	
8 times	Green (Power)	CD / DVD check pattern print	Not used in servicing.
9 times	Orange (Alarm)	CD / DVD print position correction (horizontal: X direction)	Not used in servicing.
10 times	Green (Power)	CD / DVD print position correction (vertical: Y direction)	Not used in servicing.
11 to 13 times	Orange, Green, Orange (Alarm, Power, Alarm)	Return to the menu selection	
14 times	Green (Power)	Left margin correction	Not used in servicing.
15 times	Orange (Alarm)	Return to the menu selection	

Note: If the Resume/Cancel button is pressed 16 or more times, the Alarm or Power LED lights steadily without any changes.

<Destination settings procedures>

In the destination settings mode, press the Resume/Cancel button the specified number of time(s) according to the destination listed in the table below, and press the Power button.

Time(s)	LED indication	Destination	CD / DVD print
0 times	Green (Power)	No change of the destination	
1 time	Orange (Alarm)	Japan	Supported
2 times	Green (Power)	Korea	Not supported
3 times	Orange (Alarm)	US	Not supported
4 times	Green (Power)	Europe	Supported
5 times	Orange (Alarm)	Australia	Supported

6 times	Green (Power)	Asia	Supported
7 times	Orange (Alarm)	China	Supported
8 times	Green (Power)	Taiwan	Supported
9 times	Orange (Alarm)	Return to the menu selection	

Note: After setting the destination, confirm the model name and destination in service test print or EEPROM information print.
[See 3.4. Verification Items, (1) Service test print, or (2) EEPROM information print.]

3-4. Verification Items

(1) Service test print

<EEPROM information contents>

On the service test print (sample below), confirm the EEPROM information as shown below. (The information is given in the upper portion of the printout.)

iP4200: Model name

JPN: Destination

Vx.xx: ROM version

USB (xxxxxx): USB serial number

FA = xx xx xx: Reserved for plant use

D = xxx.x: Waste ink amount (%)

CDR (+xxxxx, +yyyyy): CD / DVD sensor position correction value

AB (K = OK Y = ...): Ink system check result

<Print check items>

On the service test print (sample below), confirm the following items:

- Check 1, top of form accuracy: The lines shall not extend off the paper.

- Check 2, EEPROM information

- Check 3, nozzle check pattern: Ink shall be ejected from all nozzles.

- Check 4, check pattern for uneven printing due to line feeding: There shall be no remarkable streaks or unevenness.

- Check 5, check pattern for uneven printing due to carriage movement (standard mode): There shall be no remarkable unevenness.

- Check 6, check pattern for uneven printing due to carriage movement (9600 dpi mode): There shall be no remarkable unevenness.

- Check 7, CD / DVD sensor and automatic print head alignment sensor correction: The results shall be OK.

<Service test print sample>

Check1 Top of form accuracy

```
1P4200  JPN  V1.04 USB(1006A4) FA=03 14 99 D=004.3 CDR(+00067,+00831)
AB(K=OK  (K:3BE,Y:003) Y=OK  (K:003,Y:3C0,M:003) M=OK  (Y:031,M:3BA) C=OK  (M:003)
   PIGBk=OK (399))
```

Check3 Nozzle check pattern

Check2 EEPROM information

Check4 Check pattern for uneven printing due to line feeding

Check5 Check pattern for uneven printing due to carriage movement (standard mode)

Check6 Check pattern for uneven printing due to carriage movement (9600dpi)

CDR SENSOR=OK

Check7 CD/DVD sensor and automatic print head alignment sensor correction

(2) EEPROM information print

<How to read EEPROM information print>

Print sample:

iP4200 JPN V1.04 IF(USB2=1) D=004.5 ST=2005/05/27-18:30

ER(ER0=1000 ER1=5100) LPT=2005/06/09-09:09

PC(M=002 R=000 T=001 D=009 C=009)

CLT(BK=2004/09/27-18:30 CL=2001/09/27-18:30)

CH=00002 CT(PBK=040 BK=020 Y=109 M=012 C=113) IS(PBK=1 BK=0 Y=1 M=1 C=1)

P_ON(S=00009) A_REG=1 M_REG=0

UR(A(BKoe)=000 B(Coe)=000 C(Moe)=000 D(SCoe)=000 E(SMoe)=000 F(PBKoe)=000

G(CLbi)=000 H(SCLbi)=000 I(C-SC)=000 J(M-SM)=000 K(BK-CL)=000

L(BKbiPP)=000 M(CLbiPP)=000 N(SCLbiPP)=000) O(NZctr)=000 P(NZedge)=000

WP=0024 CDIN(LG=001 PB=000) MSD(015)

PAGE(All=00083 PP=00035 HR+MP=00003 PR+SP+SG =00000 GP =00000 PC=00000 EV=00000)

UCPAGE(All=00083 PP=00035 HR+MP=00003 PR+SP+SG =00000 GP =00000 PC=00000 EV=00000)

BPPAGE(All=00083 BSSP=00003 PC=00000)

CDPAGE(All=000) EDGE=00083 L=00000 CDR=00000

CDRP=(-00005,-00029) CDRS=(000) LM=(ASF_R:00 UT_F:00 UT_R:00)

Head TempBK=18.5 Head TempC=17.5 Env Temp=30.0 FF(3F 3F 3F)

HDEEPROM

V0001 SN=0318-A43D

LN(00000 00000 00001 00003 00001 00000 00000) ID=00

IL=(PBK=000 BK=000 Y=001 M=001 M2=001 C=000 C2=001)

Printed items:

1. Model name   2. ROM version   3. Connected I/F (USB2)   4. Waste ink amount   5. Installation date

6. Operator call/service call error record   7. Last printing time

8. Purging count (manual/deep cleaning/timer/dot count/ink tank replacement)

9. Cleaning time (BK/CL)

10. Print head replacement count   11. Ink tank replacement count (PBK/BK/Y/M/C)   12. Ink status (PBK/BK/Y/M/C)

13. Power-on count (soft)   14. Automatic print head alignment by user   15. Manual print head alignment by user

16. User print head alignment values (BKoe/Coe/Moe/SCoe/SMoe/PBKoe/CLbi/SCLbi/C-SC/M-SM/BK-CL/BKbiPP/CLbiPP/SCLbiPP/NZctr/NZedge)

17. Wiping count   18. Camera Direct Print-supported device connection record   19. Longest period where printing stops

20. ASF feed pages (total, plain paper, High Resolution Paper & Matte Photo Paper, Photo Paper Pro & Photo Paper Plus Glossy & Photo Paper Plus Semi-gloss, Glossy Photo Paper, Postcard, Envelope)

21. U-turn cassette feed pages (total, plain paper, High Resolution Paper & Matte Photo Paper, Photo Paper Pro & Photo Paper Plus Glossy & Photo Paper Plus Semi-gloss, Glossy Photo Paper, postcard, envelope)

22. Auto duplex print pages (total, Photo Paper Plus Double Sided, postcard)

23. Camera Direct print pages (total)   24. Borderless print pages   25. L & 4x6 print pages   26. Number of CDs and DVDs printed

27. CD / DVD print position adjustment   28. CD / DVD sensor correction value   29. Left margin correction value (ASF back side, U-turn front side, U-turn back side)

30. Print head temperature (BK/CL)   31. Inside temperature   32. Line inspection information

HDEEPROM

33. Version   34. Serial number

35. Lot number   36. Print head ID

37. Ink ejection level (PBK, BK, Y, M, M2, C, C2)

4. PRINTER TRANSPORTATION

This section describes the procedures for transporting the printer for returning after repair, etc.

1) In the service mode, press the Power button to finish the mode, and confirm that the paper lifting plate of the sheet feeder unit is raised.

2) Keep the print head and ink tanks installed in the carriage.
   [See Caution 1 below.]

3) Turn off the printer to securely lock the carriage in the home position. (When the printer is turned off, the carriage is automatically locked in place.)
   [See Caution 2 below.]

Caution:

(1) If the print head is removed from the printer and left alone by itself, ink (especially the pigment black ink) is likely to dry. For this reason, keep the print head installed in the printer even during transportation.

(2) Securely lock the carriage in the home position, to prevent the carriage from moving and applying stress to the carriage flexible cable, or causing ink leakage, during transportation.

Memo:

If the print head must be removed from the printer and transported alone, perform the following:

(1) Attach the protective cap (used when the packing was opened) to the print head (to protect the print head face from damage due to shocks).

Part 2
TECHNICAL REFERENCE

←→

1. NEW TECHNOLOGIES

(1) New ink tank system (PGI-5, CLI-8)

An LED is installed in each ink tank.

By the LED indication, wrong installation of the ink tanks will be prevented, and the remaining ink level can be visually recognized with the ink tanks seated in the carriage.

The combination of the new pigment-based black ink with higher resistance against bleeding or marker pens and the new dye-based inks with higher photo quality and weather resistance makes the new ink system strong in both photo and text printing.

(2) Super-photo quality printing

By the FINE technologies, 1 pl of ultra-fine ink droplet is adopted. The iP4200 provides excellent super-photo print quality without graininess at the maximum resolution of 9,600 dpi x 2,400 dpi[*1], which is equal to that of a 6-color printer.

*1: Printing at the minimum distance of 1/9600 inch between the dots.

(3) Speed

Approx. 51 sec. in 4 x 6 borderless printing (standard mode, PP-101, Full Page SCID No.2)

For reference: High-speed printing at 29 ppm in monochrome printing and 19 ppm in color printing have been achieved.

(4) New functionality in Direct Printing

Plain paper is now usable in Camera Direct Printing from a digital camera or digital video camera, if both support PictBridge.

File numbers can be printed on the images.

(5) Design

As the frame design, the printer consists of only the upper and lower cases along with the paper output tray of 4 slides (contributing to increase of the paper ejection speed). With the trays retracted, the printer is only 160 mm high (10 mm lower than the iP4000).

While keeping the functionality of retractable trays and cassettes, the round corners and edges of the upper part of the printer give gentle impression in a compact body.

(6) USB 2.0 Hi-Speed supported

The printer supports USB 2.0 Hi-Speed, enabling high speed data transfer in use with the computer, OS, and USB hub.

2. CLEANING MODE AND AMOUNT OF INK PURGED

To prevent printing problems due to bubbles, dust, or ink clogging, print head cleaning is performed before the start of printing (when the cleaning flag is on), except in the following cases:

     - Cleaning on arrival: Performed when the access cover is closed.

     - Manual cleaning / deep cleaning: Performed manually.

   \<Cleaning mode list\>

      Black: Pigment-based black

      Color: Dye-based black, cyan, magenta, yellow

Condition	Details	Amount of ink used (g) (in the normal temperature/humidity environment)	Est. required time (sec.) (not including the time of opening the caps)
On arrival of the printer (All in sequence)	First to third cleaning after shipped from the plant.	0.45 (Black) 1.50 (Color)	88
Dot count cleaning (Black)	When the specified number of dots are printed since the previous Black cleaning.	0.14 (Black)	35 (Black)
Timer cleaning - 0[*1] (Black only)	If 24 to 60 hours have elapsed since the previous Black cleaning till the start of the next printing.	0.14 (Black)	35 (Black)
Timer cleaning - 1 (Black only)	If 60 to 96 hours have elapsed since the previous Black cleaning till the start of the next printing.		
Timer cleaning - 2 (Black only)	If 96 to 120 hours have elapsed since the previous Black cleaning till the start of the next printing.		
Timer cleaning - 3[*2] (Black/Color)	If 120 to 336 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.	0.14 (Black) 0.50 (Color)	35 (Black) 40 (Color)
Timer cleaning - 4 (All in sequence)	If 336 to 504 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.	0.45 (Black) 1.00 (Color)	70
Timer cleaning - 5 (All in sequence)	If 504 to 720 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.		70
Timer cleaning - 6 (All in sequence)	If 720 to 1,080 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.		70
Timer cleaning - 7 (All in sequence)	If 1,080 to 2,160 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.	0.78 (Black) 1.00 (Color)	70

Timer cleaning - 8 (All in sequence)	If 2,160 to 4,320 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.	1.58 (Black) 1.00 (Color)	80
Timer cleaning - 9 (All in sequence)	If 4,320 to 8,640 hours have elapsed since the previous Black/Color cleaning till the start of the next printing.	1.58 (Black) 1.00 (Color)	80
Timer cleaning - 10 (All in sequence)	If 8,640 or longer hours have elapsed since the previous Black/Color cleaning till the start of the next printing.		80
At print head replacement (All in sequence)	When the print head is removed and installed.	0.45 (Black) 1.50 (Color)	88
At ink tank replacement*3 (Black/Color/All in sequence)	When an ink tank is replaced (without the print head removal or re-installation)	0.30 (Black) 1.00 (Color)	70 (All in sequence) 35 (Black) 60 (Color)
Manual cleaning (Black/Color/All at the same time)	- Via the operation panel (All at the same time only) - Via the printer driver (Selectable from Black, Color, or All at the same time)	0.14 (Black) 0.50 (Color)	45 (All at the same time) 35 (Black) 40 (Color)
Deep cleaning (Black/Color/All at the same time)	Via the printer driver (Selectable from Black, Color, or All at the same time)	1.58 (Black) 1.00 (Color)	80 (All at the same time) 45 (Black) 55 (Color)
If the print head has not been capped before power-on (All in sequence)		0.30 (Black) 1.00 (Color)	70 (All in sequence)

*1: When 24 to 60 hours have elapsed since the previous Black cleaning, timer cleaning - 0 is performed. However, this cleaning will be conducted up to 5 times from the printer installation, and no further timer cleaning - 0 will be performed.

*2: The period of time since the previous cleaning is counted by Black and Color separately. For this reason, the cleaning mode may differ according to Black or Color.

*3: When only the black ink tank is replaced, Black cleaning is performed. One of the color ink tanks is replaced, Color cleaning is performed. Both the black and color ink tanks are replaced, All-at-the-same-time cleaning is performed.

3. PRINT MODE

3-1. Resolution

(cyan)	Default setting
(green)	Selectable in the printer driver Main tab
(yellow)	Selectable after clicking Custom in the Main tab

Ink used: PigBk: PGI-5BK
C: CLI-8C
M: CLI-8M
Y: CLI-8Y
k: CLI-8BK

(1) Normal color printing

Paper type	Printer driver Custom setting	Fast 5	<- 4	3	-> 2	Fine 1
Plain paper	Print quality / Resolution HxV (dpi) / Print control / Ink used	Custom / PigBK: 300x300, C/M/Y: 300x300 / 1 pass, Bi-directional / PigBk/C/M/Y	Fast / PigBK: 300x300, C/M/Y: 300x300 / 1 pass, Bi-directional / PigBk/C/M/Y	Standard / PigBk: 600x600, C/M/Y: 1200x1200 / 1 pass, Bi-directional / PigBk/C/M/Y	High / PigBk: 600x600, C/M/Y: 1200x1200 / 4 passes, Bi-directional / PigBk/C/M/Y	
Photo Paper Pro PR-101	Print quality / Resolution HxV (dpi) / Print control / Ink used			Standard / C/M/Y/c/m/k: 1200x2400 / 4 passes, Bi-directional / C/M/Y/c/m/k	High / C/M/Y/c/m/k: 1200x2400 / 6 passes, Bi-directional / C/M/Y/c/m/k	Custom / C/M/Y/c/m/k: 9600x2400 / 16 passes, Bi-directional / C/M/Y/c/m/k
Photo Paper Plus Glossy Photo Paper Plus Semi-gloss PP-101/SG-101	Print quality / Resolution HxV (dpi) / Print control / Ink used		Fast / C/M/Y/c/m/k: 1200x2400 / 3 passes, Bi-directional / C/M/Y/c/m/k	Standard / C/M/Y/c/m/k: 1200x2400 / 4 passes, Bi-directional / C/M/Y/c/m/k	High / C/M/Y/c/m/k: 1200x2400 / 6 passes, Bi-directional / C/M/Y/c/m/k	
Matte Photo Paper MP-101	Print quality / Resolution HxV (dpi) / Print control / Ink used			Standard / C/M/Y/c/m/k: 1200x2400 / 4 passes, Bi-directional / C/M/Y/c/m/k	High / C/M/Y/c/m/k: 1200x2400 / 6 passes, Bi-directional / C/M/Y/c/m/k	
Glossy Photo Paper GP-401/501	Print quality / Resolution HxV (dpi) / Print control / Ink used			Standard / C/M/Y/c/m/k: 1200x2400 / 4 passes, Bi-directional / C/M/Y/c/m/k	High / C/M/Y/c/m/k: 1200x2400 / 6 passes, Bi-directional / C/M/Y/c/m/k	
Photo Paper Plus Double Sided PP-101D	Print quality / Resolution HxV (dpi) / Print control / Ink used			Standard / C/M/Y/c/m/k: 1200x2400 / 4 passes, Bi-directional / C/M/Y/c/m/k	High / C/M/Y/c/m/k: 1200x2400 / 6 passes, Bi-directional / C/M/Y/c/m/k	
High Resolution Paper HR-101S	Print quality / Resolution HxV (dpi) / Print control / Ink used			Standard / C/M/Y/c/m/k: 1200x2400 / 4 passes, Bi-directional / C/M/Y/c/m/k	High / C/M/Y/c/m/k: 1200x2400 / 6 passes, Bi-directional / C/M/Y/c/m/k	
Envelope	Print quality / Resolution HxV (dpi) / Print control / Ink used			Standard / PigBk/Y: 600x600, C/M/k: 1200x1200 / 2 passes, Bi-directional / PigBk/C/M/Y/k	High / PigBk/Y: 600x600, C/M/k: 1200x1200 / 4 passes, Bi-directional / PigBk/C/M/Y/k	
Transparency CF-102	Print quality / Resolution HxV (dpi) / Print control / Ink used			Standard / PigBk: 600x600, C/M/Y/k: 1200x1200 / 4 passes, Bi-directional / PigBk/C/M/Y/k	High / PigBk: 600x600, C/M/Y/k: 1200x1200 / 6 passes, Bi-directional / PigBk/C/M/Y/k	
T-shirt transfer TR-301	Print quality / Resolution HxV (dpi) / Print control / Ink used			High / C/M/Y/k: 1200x1200 / 6 passes, Bi-directional / C/M/Y/k		
CD-R (recommended)	Print quality / Resolution HxV (dpi) / Print control / Ink used			Fast / C/M/Y/c/m/k: 1200x2400 / 4 passes, Bi-directional / C/M/Y/c/m/k	Standard / C/M/Y/c/m/k: 1200x2400 / 6 passes, Bi-directional / C/M/Y/c/m/k	High / C/M/Y/c/m/k: 1200x2400 / 8 passes, Bi-directional / C/M/Y/c/m/k
CD-R (other)	Print quality / Resolution HxV (dpi) / Print control / Ink used			Fast / C/M/Y/c/m/k: 1200x2400 / 4 passes, Bi-directional / C/M/Y/c/m/k	Standard / C/M/Y/c/m/k: 1200x2400 / 6 passes, Bi-directional / C/M/Y/c/m/k	High / C/M/Y/c/m/k: 1200x2400 / 8 passes, Bi-directional / C/M/Y/c/m/k
Other Photo Paper	Print quality / Resolution HxV (dpi) / Print control / Ink used			Standard / C/M/Y/c/m/k: 1200x2400 / 8 passes, Bi-directional / C/M/Y/c/m/k		

(2) Grayscale printing

Paper type	Printer driver Custom setting	Fast 5	<- 4	3	-> 2	Fine 1
Plain paper	Print quality / Resolution HxV (dpi) / Print control / Ink used	Custom / PigBk: 300x300 / 1 pass, Bi-directional / PigBk	Fast / PigBk: 300x300 / 1 pass, Bi-directional / PigBk	Standard / PigBk: 600x600 / 1 pass, Bi-directional / PigBk	High / PigBk: 600x600 / 4 passes, Bi-directional / PigBk	
Envelope	Print quality / Resolution HxV (dpi) / Print control / Ink used			Standard / PigBk: 600x600 / 2 passes, Uni-directional / PigBk	High / PigBk: 600x600 / 4 passes, Uni-directional / PigBk	

(3) Borderless printing

Paper type	Printer driver Custom setting	Fast 5	<- 4	3	-> 2	Fine 1
Plain paper	Print quality / Resolution HxV (dpi) / Print control / Ink used			**Standard** Y: 600x600, C/M/k: 1200x1200 2 passes, Bi-directional C/M/Y/k		
Photo Paper Pro PR-101	Print quality / Resolution HxV (dpi) / Print control / Ink used			**Standard** C/M/Y/c/m/k: 1200x2400 4 passes, Bi-directional C/M/Y/c/m/k	**High** C/M/Y/c/m/k: 1200x2400 6 passes, Bi-directional C/M/Y/c/m/k	**Custom** C/M/Y/c/m/k: 9600x2400 16 passes, Bi-directional C/M/Y/c/m/k
Photo Paper Plus Glossy Photo Paper Plus Semi-gloss PP-101/SG-101	Print quality / Resolution HxV (dpi) / Print control / Ink used		**Fast** C/M/Y/c/m/k: 1200x2400 3 passes, Bi-directional C/M/Y/c/m/k	**Standard** C/M/Y/c/m/k: 1200x2400 4 passes, Bi-directional C/M/Y/c/m/k	**High** C/M/Y/c/m/k: 1200x2400 6 passes, Bi-directional C/M/Y/c/m/k	
Matte Photo Paper MP-101	Print quality / Resolution HxV (dpi) / Print control / Ink used			**Standard** C/M/Y/c/m/k: 1200x2400 4 passes, Bi-directional C/M/Y/c/m/k	**High** C/M/Y/c/m/k: 1200x2400 6 passes, Bi-directional C/M/Y/c/m/k	
Glossy Photo Paper GP-401/501	Print quality / Resolution HxV (dpi) / Print control / Ink used			**Standard** C/M/Y/c/m/k: 1200x2400 4 passes, Bi-directional C/M/Y/c/m/k	**High** C/M/Y/c/m/k: 1200x2400 6 passes, Bi-directional C/M/Y/c/m/k	
Photo Paper Plus Double Sided PP-101D	Print quality / Resolution HxV (dpi) / Print control / Ink used			**Standard** C/M/Y/c/m/k: 1200x2400 4 passes, Bi-directional C/M/Y/c/m/k	**High** C/M/Y/c/m/k: 1200x2400 6 passes, Bi-directional C/M/Y/c/m/k	
Other Photo Paper	Print quality / Resolution HxV (dpi) / Print control / Ink used			**Standard** C/M/Y/c/m/k: 1200x2400 8 passes, Bi-directional C/M/Y/c/m/k		

(4) Duplex printing

Paper type	Printer driver Custom setting	Fast 5	<- 4	3	-> 2	Fine 1
Plain paper	Print quality / Resolution HxV (dpi) / Print control / Ink used	**Custom** PigBk: 300x300, C/M/Y: 600x600 1 pass, Bi-directional PigBk/C/M/Y	**Fast** PigBk: 300x300, C/M/Y: 300x300 1 pass, Bi-directional PigBk/C/M/Y	**Standard** PigBk: 600x600, C/M/Y: 1200x1200 1 pass, Bi-directional PigBk/C/M/Y	**High** PigBk: 600x600, C/M/Y: 1200x1200 4 passes, Bi-directional PigBk/C/M/Y	
Photo Paper Plus Double Sided PP-101D	Print quality / Resolution HxV (dpi) / Print control / Ink used			**Standard** C/M/Y/c/m/k: 1200x2400 4 passes, Bi-directional C/M/Y/c/m/k	**High** C/M/Y/c/m/k: 1200x2400 6 passes, Bi-directional C/M/Y/c/m/k	

(5) Camera Direct printing

Paper type	Printer driver Custom setting	Fast 5	<- 4	3	-> 2	Fine 1	Card Direct Printing mode
Plain paper	Print quality / Resolution HxV (dpi) / Print control / Ink used						PigBk: 600x600, C/M/Y: 1200x1200 4 passes, Bi PigBk/C/M/Y
Photo Paper Pro PR-101	Print quality / Resolution HxV (dpi) / Print control / Ink used				**High** C/M/Y/c/m/k: 1200x2400 6 passes, Bi-directional C/M/Y/c/m/k		
Photo Paper Plus Glossy Photo Paper Plus Semi-gloss PP-101/SG-101	Print quality / Resolution HxV (dpi) / Print control / Ink used				**High** C/M/Y/c/m/k: 1200x2400 6 passes, Bi-directional C/M/Y/c/m/k		

4. FAQ (Problems Specific to the iP4200 and Corrective Actions)

| No.	*	Function	Phenomenon	Condition	Cause	Corrective action	Possible call or complaint
1	B	Print results	Skewed paper feeding	- Paper feeding from the cassette, Photo Paper Plus Double Sided, 5 x 7 size	Due to its mechanism, contact of the PF pinch rollers to the 5 x 7 size paper is uneven, which is likely to cause skewed paper feeding.	Change the paper feeding method from the cassette to the auto sheet feeder.	- Paper feeds at an angle. - A margin appears on printouts.
2	B	Paper feed	Improper paper feeding: - Multi-feeding - Skewed paper feeding - Paper jam	- Paper feeding from the ASF - Plain paper - Highest print speed (Custom setting to 5) - In the high temperature and high humidity environment - In the low temperature and low humidity environment - With the maximum amount of paper set (13 mm)	In the high temperature and high humidity environment, paper becomes wavy; in the low temperature and low humidity environment, paper curls significantly. When the maximum amount of paper is set in the ASF, and if the paper-return tab fits in a wave or curl of the paper, the tab slips and does not catch paper properly, causing paper feed problems.	- Reduce the amount of paper set in the ASF to half (approx. 5 mm high).	- Multiple sheets of paper feed at the same time. - Paper feeds at an angle. - A paper jam occurs.
3	C	Print results	Skewed paper feeding (at the level of +/- 1%)	- Paper feeding from the ASF - Credit Card size	Since coaxial tolerance between the pinch roller and the LF roller, which determines the paper feed alignment, is 0.2mm, skewed paper feeding can occur. However, according to the field data of current models, the skewness level caused by the coaxial tolerance of 0.2mm is within the criteria of +/- 1%, thus the phenomenon is left as is.	- Align the paper guide to the paper edge tighter than usual.	- Paper feeds at an angle. - A margin appears on printouts.
			Soiling on the back side of paper (lines or streaks parallel to the paper feed direction)	- After continuous borderless printing of small sized paper (such as 4 x 6), when a larger sized paper (such	In borderless printing, printing is performed to the size slightly larger than the paper size, and ink off the	1. Perform Bottom plate cleaning (from the printer driver) up to 3 times[1].	- Paper gets smeared. - The back side of paper gets smeared.

4	A	Print results		as A4) is printed. - With Photo Paper Plus Double Sided or postcards, the phenomenon is likely to be noticeable and to be complained of by users, as printing is performed on both sides of such paper.	paper is absorbed by the platen's ink absorber. Absorbed ink may attach to the platen rib(s) after several dozen sheets are printed, causing soiling at the leading edge of paper or on the back side of paper.	2. If soiling on the paper still remains after 3 times of Bottom plate cleaning, wipe the platen rib(s) and their surroundings with a cotton swab.	
5	B	Print results	Soiling on paper in automatic duplex printing (lines or streaks perpendicular to the paper feed direction)	- Automatic duplex printing (Photo Paper Plus Double Sided, postcards, plain paper)	On the rib(s) inside the sheet feed unit used for duplex printing, ink mist may accumulate, smearing paper.	**Temporary operational solution:** Cancel automatic duplex printing, and manually print each side of paper. **Cleaning by user:** 1. Perform Bottom plate cleaning (from the printer driver) up to 3 times[*1]. 2. If soiling on the paper still remains after 3 times of Bottom plate cleaning, wipe the platen rib(s) and their surroundings with a cotton swab. If the phenomenon persists after conducting 1 and 2, servicing is required. **Service:** Wipe any soiling or dirt off from the sheet feed unit and the bottom case unit ribs[*2].	- Paper gets smeared. - The back side of paper gets smeared. - Even after Bottom plate cleaning was performed, and the platen ribs were cleaned with cotton swab, paper gets smeared.
			Scratches on paper	- PP-101D, PP-101, PR-101, SG-101, etc. - Paper feeding from the cassette	Scratches on the PF return lever due to paper feeding from the cassette, and duplex printing path.	- Change the paper feeding method from the cassette to the auto sheet feeder. - If automatic duplex printing is performed, cancel it, and, by setting only a single sheet of paper in	- Paper is scratched. - Marks appear on printed paper.

|							
							the auto sheet feeder, manually print each side of paper.
6	C	Print results		- PP-101D, PP-101, PR-101, SG-101, etc. - Paper feeding from the ASF - Multiple number of sheets loaded	When multiple sheets of paper are set, the back side of paper being picked up scratches the front side of paper beneath (especially where the paper feed rollers contact when picking up the paper).	Set only a single sheet of paper in the auto sheet feeder.	
7	C	Print results	Soiling on paper	The printer has been used for a long period of time with the ASF cover closed before printing is performed using the ASF.	Due to ink mist attached to the ASF sub-pick-up rollers. If printing is done from the cassette with the ASF cover closed, ink mist is kept inside the printer, attaching to the ASF sub-pick-up rollers. Since the sub-rollers usually do not contact the paper, ink mist can easily accumulate, especially during printing on small-sized paper which never contacts the sub-rollers.	Clean the ASF sub-rollers (see *3 for details.)	
8	B	Print results	- Skewed paper feeding	- SG-101 - Paper feeding from the ASF - 10 sheets (max.) set in the ASF	When 10 sheets of paper are set in the ASF, and if they warp significantly, the warping portions of paper get over the cover guide, not being aligned along the guide properly.	- Straighten the paper. - Set 5 or less sheets of paper in the ASF.	- Paper feeds at an angle. - A margin appears on printouts.

*1: Change the paper in each Bottom plate cleaning. The cleaning can end when paper does not get any soiling.

*2: Locations to clean in servicing when soiling on paper in automatic duplex printing persists:
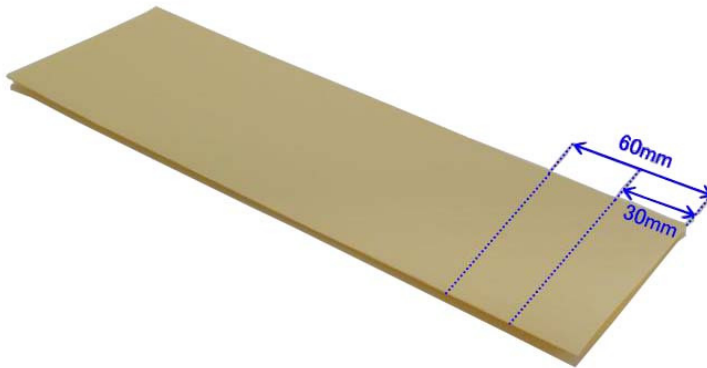
BOTTOM CASE UNIT

SHEET FEED UNIT
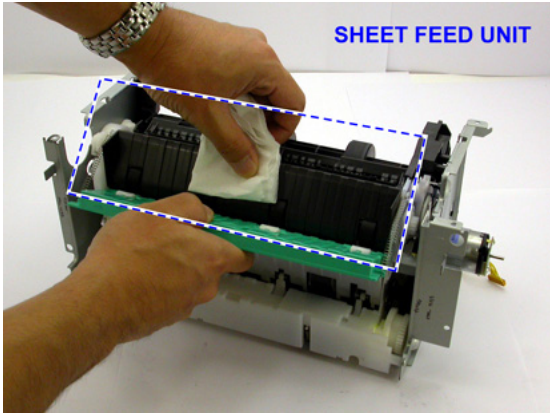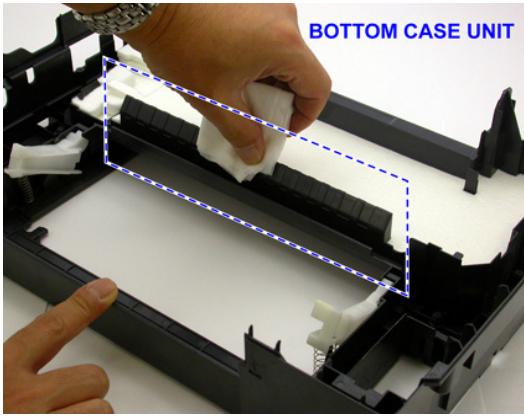
*3: How to prepare and set the ASF sub-roller cleaning sheet:

   1) Fold a sheet of plain paper lengthwise in half.
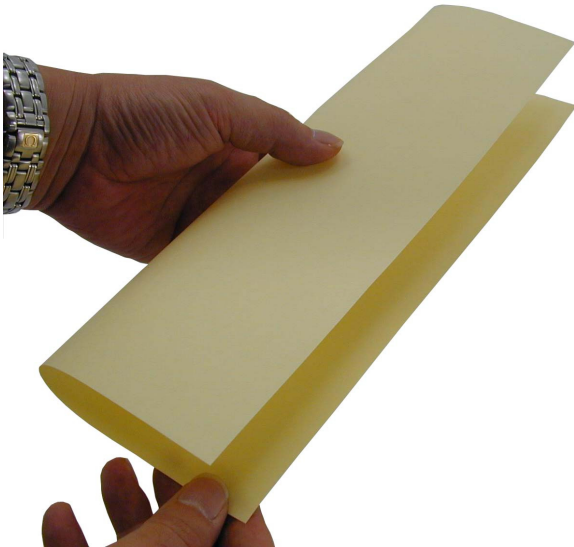
2) Fold the paper at approx. 60 mm from the end, and fold the folded end in half backward, as shown below.

3) Moisten the folded end portion (indicated by the blue circle in the figure below) using a wipe, and set the paper in the ASF so that the moistened edge of the paper contacts the 2 sub-rollers. Then, fold the other end of the paper along the ASF cover edge to hook the paper to the ASF cover, as shown below.

4) Press and hold the Resume/Cancel button until the Power LED blinks 3 times, then release the button to perform the paper feed roller cleaning. See "Stand alone printer operation," for details.

* Occurrence level:

A: The symptom is likely to occur frequently. (Caution required)

B: The symptom may occur under certain conditions, but likeliness is assumed very low in practical usage.

C: The symptom is unlikely to be recognized by the user, and no practical issues are assumed.

Part 3
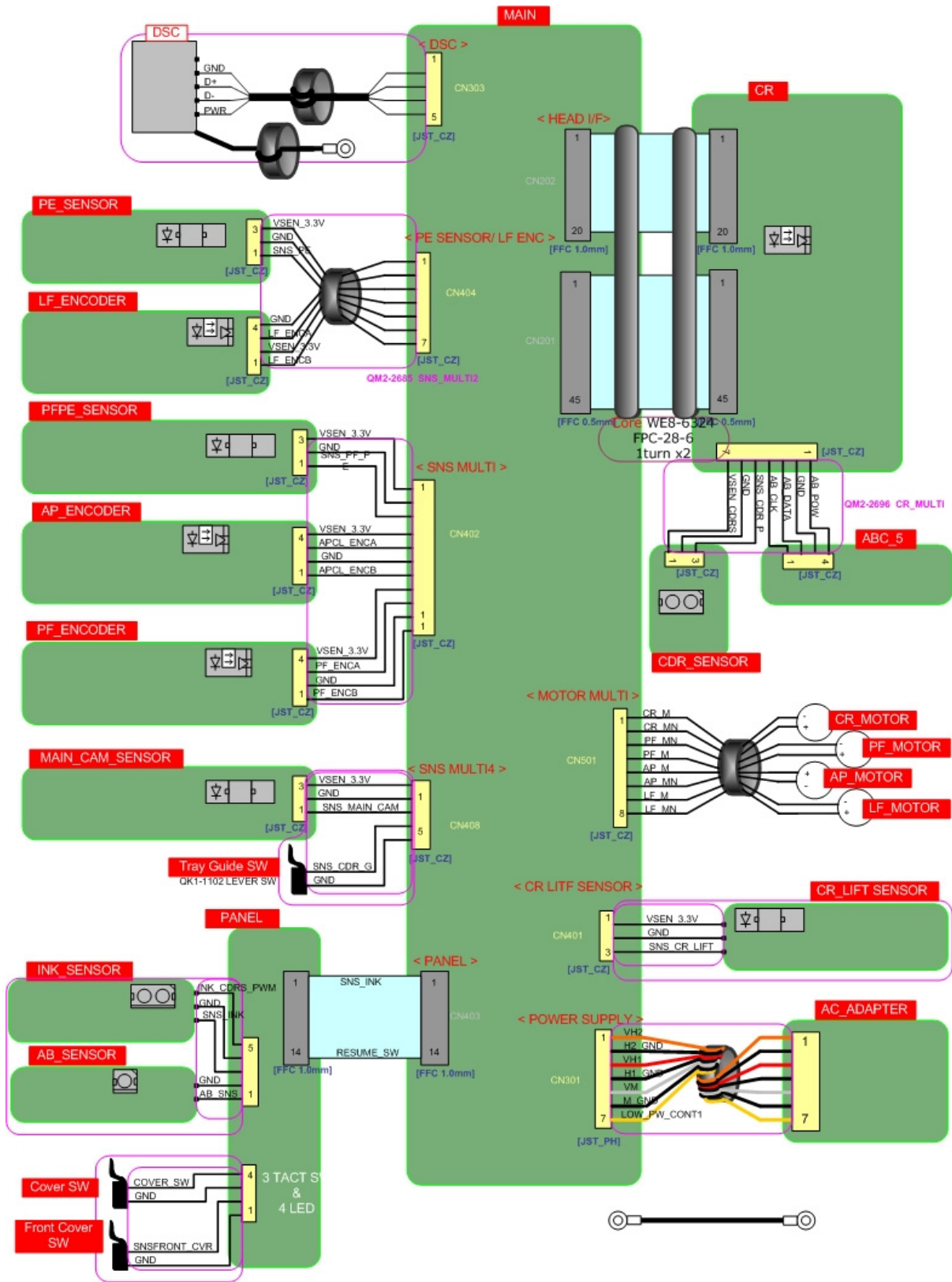
APPENDIX

←→

1. BLOCK DIAGRAM

1-1. PIXMA iP4200

← **<Part 3: 1. BLOCK DIAGRAM>** →

2. CONNECTOR LOCATION AND PIN LAYOUT

2-1. Logic Board Ass'y
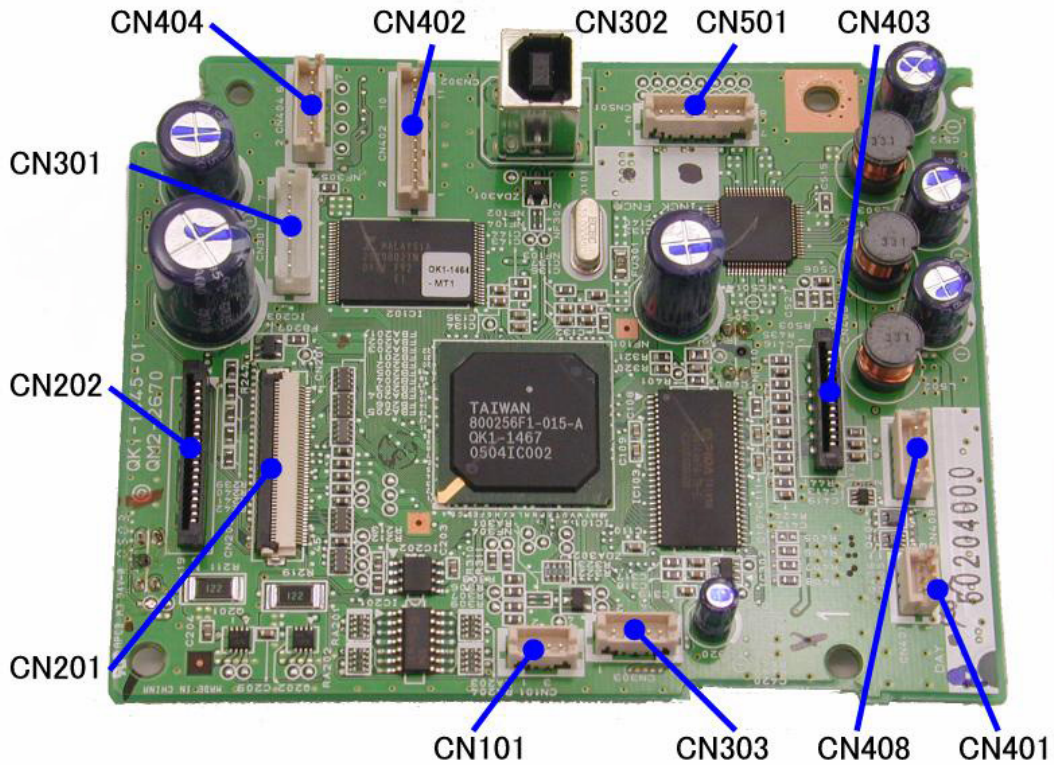
CN101 Not used

CN201 (Print head 1/2 [Carriage unit])

No.	Signal name	Function	Input / Output
1	AB_PWR	AB power supply	-
2	AB_DATA	AB data signal	BUS
3	AB_PWR	AB power supply	-
4	AB_CLK	AB CLK signal	BUS
5	LOGIC_GND	Logic GND	-
6	H_D3	Head data (SC1)	OUT
7	H_D0	Head data (BK1)	OUT
8	H_D1	Head data (BK2)	OUT
9	H_D5	Head data (SM1)	OUT
10	H_ENB0	Head heat enable signal 0 (BK)	OUT
11	LOGIC_GND	Logic GND	-
12	DIA0	Diode sensor anode 0	IN
13	LOGIC_GND	Logic GND	-
14	H_D2	Head data (C1)	OUT
15	H_D4	Head data (M1)	OUT
16	H_ENB3	Head heat enable signal 3 (SCol)	OUT
17	H_D8	Head data (Y1)	OUT
18	H_ENB1	Head heat enable signal 1 (Col-1)	OUT
19	H_LATCH	Head data latch signal	OUT
20	H_EEPROM_CS	Head EEPROM chip select signal	OUT

21	H_EEPROM_SK	Head EEPROM serial clock signal	OUT
22	H_D10	Head data (SM2)	OUT
23	LOGIC_GND	Logic GND	-
24	H_CLK	Head data transfer clock signal	OUT
25	H_EEPROM_DIO	Head EEPROM data signal	OUT
26	H_D12	Head data (SC2)	OUT
27	H_D6	Head data (PBK1)	OUT
28	LOGIC_GND	Logic GND	-
29	CR_ENCB	CR encoder phase B	IN
30	LOGIC_GND	Logic GND	-
31	CR_ENCA	CR encoder phase A	IN
32	LOGIC GND	Logic GND	-
33	DIA1	Diode sensor anode 1	IN
34	LOGIC GND	Logic GND	-
35	H_D7	Head data (PBK2)	OUT
36	H_D11	Head data (M2)	OUT
37	H_D9	Head data (Y2)	OUT
38	H_D13	Head data (C2)	OUT
39	SNS_CDR_P	CDR position sensor signal	IN
40	THERMO	CR temperature sensor signal	IN
41	DIK	DIK (Logic GND)	-
42	H_ENB2	Head heat enable signal 2 (Col-2)	OUT
43	VSEN_CDRS	Power supply for CDR sensor	OUT
44	VSEN_3.3V	Power supply for sensor 3.3V	OUT
45	LOGIC GND	Logic GND	-

CN202 (Print head 2/2 [Carriage unit])

No.	Signal name	Function	Input / Output
1 to 3	H_GND	Head GND	–
4 to 6	HVH_24V	Head drive power supply 24V	OUT
7 to 10	H_GND	Head GND	–
11to 12	HVH_16V	Head drive power supply 16V	OUT
13 to 16	HVH_24V	Head drive power supply 24V	OUT
17	LOGIC_GND	Logic GND	–
18	HVDD_3.3V	Head logic drive power supply 3.3V	OUT
19	LOGIC_GND	Logic GND	–
20	HVDD_3.3V	Head logic drive power supply 3.3V	OUT

CN301 (AC adapter)

No.	Signal name	Function	Input / Output
1	VH2	Head power supply	IN
2	H2_GND	Head GND	-
3	VH1	Head power supply	IN
4	H1_GND	Head GND	-
5	VM	Motor power supply	IN
6	M_GND	Motor GND	-
7	PW_CONT	Power supply control signal	OUT

CN302 (USB I/F)

No.	Signal name	Function	Input / Output
1	SNS_USB	USB: VBUS power supply sense	IN
2	D-	USB: D- signal	BUS
3	D+	USB: D+ signal	BUS
4	GND	GND	-
5 to 9	GND	GND	-

CN303 (DSC harness)

No.	Signal name	Function	Input / Output
1	GND	GND	-
2	GND	GND	-
3	D+	DSC-USB: D+ signal	BUS
4	D-	DSC-USB: D- signal	BUS
5	PWR	DSC-USB: VBUS signal	OUT

CN401 (CR lift sensor harness)

1	VSEN_3.3V	Power supply for sensor 3.3V	OUT
2	GND	GND	-
3	SNS_CR_LIFT	CR lift sensor	IN

CN402 (Sensor multi 1 harness)

No.	Signal name	Function	Input / Output
1	VSEN_3.3V	Power supply for sensor 3.3V	OUT
2	GND	GND	-
3	SNS_PF_PE	PF/PE sensor	IN
4	GND	GND	-
5	APCL_ENCA	APCL encoder phase A	IN
6	VSEN_3.3V	Power supply for sensor 3.3V	OUT
7	APCL_ENCB	APCL encoder phase B	IN

No.	Signal name	Function	Input / Output
8	GND	GND	-
9	PF_ENCA	PF encoder phase A	IN
10	VSEN_3.3V	Power supply for sensor 3.3V	OUT
11	PF_ENCB	PF encoder phase B	IN

CN403 (Operation panel ass'y)

No.	Signal name	Function	Input / Output
1	RESUME_SW	Resume key switch	IN
2	LED_BIN1	Bin 1 LED display	OUT
3	LED_RESUME(ORANGE)	Resume LED display	OUT
4	LED_BIN2	Bin 2 LED display	OUT
5	POW_SW	Power key switch	IN
6	BIN_SW	Bin switch	IN
7	LED_POWER(GREEN)	Power LED display	OUT
8	GND	GND	-
9	SNS_FRONT_CVR	Front cover sensor	IN
10	AB_POW	Power supply for AB	OUT
11	DOOR	Door sensor	IN
12	AB_SNS	AB sensor	IN
13	INK_CDRS_PWM	CD-R LED control signal	OUT
14	SNS_INKS	Ink sensor	IN

CN404 (PE sensor / LF encoder harness)

No.	Signal name	Function	Input / Output
1	VSEN_3.3V	Power supply for sensor 3.3V	OUT
2	GND	GND	-
3	SNS_PE	Paper empty sensor	IN
4	GND	GND	-
5	LF_ENCA	LF encoder phase A	IN
6	VSEN_3.3V	Power supply for sensor 3.3V	OUT
7	LF_ENCB	LF encoder phase B	IN

CN408 (Main_cam / CDR_G)

No.	Signal name	Function	Input / Output
1	VSEN_3.3V	Power supply for sensor 3.3V	OUT
2	GND	GND	-
3	SNS_MAIN_CAM	Main cam sensor	IN
4	SNS_CDR_G	CD-R sensor	IN
5	GND	GND	-

CN501 (Motor multi harness)

No.	Signal name	Function	Input / Output
1	CR_M	CR motor +	OUT
2	CR_MN	CR motor -	OUT
3	PF_MN	PF motor -	OUT
4	PF_M	PF motor +	OUT
5	AP_M	AP motor +	OUT
6	AP_MN	AP motor -	OUT
7	LF_M	LF motor +	OUT
8	LF_MN	LF motor -	OUT

2-2. Carriage Board (Print Head Connector)
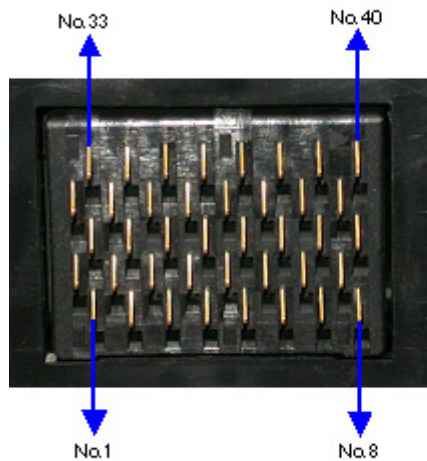
No.	Signal name	Function	Input / Output
1, 2	A_GNDH	Head GND	-
3	HD2_C1	Head data C1	OUT
4	HD8_Y1	Head data Y1	OUT
5	VSS	Logic GND	-
6	HD6_PBK1	Head data PBK1	OUT
7, 8	B_GNDH	Head GND	-
9	HD3_SC1	Head data SC1	OUT
10	HD5_SM1	Head data SM1	OUT
11	HD4_M1	Head data M1	OUT
12	HENB1	Head heat enable signal 1	OUT
13	HD10_SM2	Head data SM2	OUT
14	VSS	Logic GND	-
15	HD11_M2	Head data M2	OUT
16	DIK	Diode sensor cathode	IN
17	HD0_K1	Head data BK1	OUT
18	HENB0	Head heat enable signal 0	OUT
19	HENB3	Head heat enable signal 3	OUT
20	HLAT	Head data latch signal	OUT
21	HD12_SC2	Head data SC2	OUT
22	HD7_PBK2	Head data PBK2	OUT
23	HD9_Y2	Head data Y2	OUT
24	HENB2	Head heat enable signal 2	OUT
25	HD1_K2	Head data BK2	OUT
26	DIA0	Diode sensor anode 0	IN
27	HVDD_3.3V	Head logic power supply 3.3V	OUT
28	ROM_CS	Head EEPROM chip select signal	OUT
29	HCLK	Head clock signal	OUT
30	ROM_DIO (O)	Head EEPROM data signal	IN

31	HD13_C2	Head data C2	OUT
32	B_VH_16V	Head drive power supply 16V	OUT
33,34	A_VH_24V	Head drive power supply 24V	OUT
35	HVDD_3.3V	Head logic power supply 3.3V	OUT
36	ROM_SK	Head EEPROM serial clock signal	OUT
37	ROM_DIO (I)	Head EEPROM data signal	OUT
38	DIA1	Diode sensor anode 1	IN
39	VHT	Head drive power supply 24V	OUT
40	B_VH_24V	Head drive power supply 24V	OUT

PIXMA iP4200 Specifications

\<Printer\>

Type	Desktop serial color bubble jet printer
Paper feeding method	Auto sheet feed (ASF, cassette, automatic duplex printing, CD / DVD printing[*1])
Resolution	9,600 x 2,400dpi (Max.)

Throughput (target value)	- 4 x 6, borderless printing: Approx. 51 sec. (standard mode, PP-101, Full Page SCID No. 2)
	- Camera Direct Printing: Approx. 1 minute and 35 sec. (4 x 6, borderless printing, PP-101, default settings)
	For reference:
	                    Fast Standard
	  Black (Fine Black) 29ppm 14.7ppm
	  Color (Fine Color) 19ppm 10.7ppm

Printing direction	Bi-directional, uni-directional
Print width	Max. 203.2mm (216mm in borderless printing)
Interface	USB 2.0 Hi-Speed
ASF stacking capacity	Plain paper: Max. 13mm (Approx. 150 sheets of $64g/m^2$ paper)
Paper weight	64 to $105g/m^2$
Detection functions	Access cover open, Presence of print head / ink tanks, Opening / Closing of front door, Remaining ink amount (optical / dot count), Printing position, Paper presence, Paper end sensor, Waste ink amount, Internal temperature, Pick-up roller, Paper feed roller position, Carriage position, Head-to-paper distance, Supported camera direct printing device, Presence of CD / DVD
Acoustic noise (Highest print quality)	- Highest print quality settings: Approx. 34.2dB - Quiet mode: Approx. 33.5dB

Environmental requirements	During operation	Temperature	5C to 35C (41F to 95F)
		Humidity	10%RH to 90%RH (no condensation)
	Non operation	Temperature	0C to 40C (32F to 104F)
		Humidity	5%RH to 95%RH (no condensation)

Power supply	Power supply voltage, frequency	Power consumption	Standby	Power-off
	AC 100 to 120V, 50/60Hz	Approx. 23W	Approx. 0.8W	Approx. 0.4W
	AC 220 to 240V, 50/60Hz	Approx. 23W	Approx. 0.8W	Approx. 0.4W

External dimensions	Printer:
	   With the paper support and output tray retracted: Approx. 419 (W) x 299 (D) x 160 (H) mm
	   With the paper support and output tray extended: Approx. 419 (W) x 610 (D) x 305 (H) mm

Weight	Approx. 6.5kg, not including print head and optional units

Related standards (Printer, Adapter)	Electromagnetic radiance:
	   VCCI, FCC, IC, CE Mark, Taiwan EMC, C-tick, CCC (EMC), Korea MIC, Gost-R
	Electrical safety:
	   Electrical Appliance and Material Safety Law (DENAN), UL, C-UL, CB Report, CE Mark, GS, Gost-R, FT, SASO, CCC, SPRING, Korea EK, IRAM (Argentine)
	Environmental regulations:
	   RoHS (EU), WEEE (EU), Korea Package Recycle Law, Green Point (Germany), Energy Star, Eco Mark, Law on Promoting Green Purchasing

Serial number location	On the carriage flexible cable holder (visible on the right of the carriage after the printer is turned on, the access cover is opened, and the carriage moves to the center.)
Remaining ink amount	

detection	Available (automatic detection by optical method and dot count, enabled at default)
Paper type detection	Not available
Print head alignment	Available (automatic or manual alignment via driver utilities, or the Resume/Cancel button in Camera Direct Printing, automatic alignment at default)

*1: Only for CD / DVD printing supported regions

\<Print head\>

Type	Single head with 5 removable ink tanks (each color)
Print head	Black: 320 nozzles (600dpi), 30pl (pigment-based black) Color: 256 nozzles x 6 (1,200dpi), 1pl / 5pl (cyan, magenta), 2.5pl (black, yellow)
Ink color	Pigment-based black, Dye-based black, cyan, magenta, yellow
Ink tank	PGI-5BK (pigment-based), CLI-8BK/C/M/Y (dye-based)
Weight (Net)	Print head, approx. 56g
Supply method	As a service part (not including ink tanks)
Part number	QY6-0059-000

\<Supported ink tanks\>

Model name and destination		BCI-9BK	PGI-5BK	BCI-7eBK	BCI-7eC	BCI-7eM	BCI-7eY	CLI-8BK	CLI-8C	CLI-8M	CLI-8Y
		Pigment-based ink	Dye-based ink								
PIXUS iP4200	Japan	O	X	O	O	O	O	X	X	X	X
PIXMA iP4200	Other than Japan	X	O	X	X	X	X	O	O	O	O

O: Usable

X: Not usable

Note: The ink tanks for the Japanese models are not compatible with those for the non-Japanese models. Be sure to use the appropriate ink tanks in servicing.

← **\<PIXMA iP4000 Specifications\>**